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DURING LABOR

Relieved by Anæsthesia.

BY
SAMUEL C. BUSEY, M.D.,
OF WASHINGTON, D. C.

*Read before the Medical Society of the District of Columbia,
March 21, 1887.*

*Reprinted from the Journal of the American Medical
Association, April 30, 1887.*



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PERSISTENT VOMITING DURING LABOR RELIEVED BY ANÆSTHESIA.

Nausea and vomiting at the beginning or during the progress of labor is not uncommon. When occurring during the early period it usually ceases with the evacuation of the stomach, or only recurs occasionally. In some cases the patient will vomit at long intervals until the delivery is accomplished. Such vomiting is usually regarded by the laity as beneficial, the popular belief being that "sick labors are easy labors." Obstetricians do not seem to have attached any special significance to the occurrence of such gastric disturbances during the first stage of labor; but when persistent during the second stage, producing exhaustion and lessening the activity of uterine contractions, the safety of the patient may demand immediate delivery.

The complication of labor with persistent vomiting must be very rare, as I have not found a single case reported in detail, after an extensive examination of obstetric literature. Only a few authors casually refer to the subject. The following case, though probably not a unique observation, may prove instructive, in so far as it may attract attention to the subject, and, possibly, suggest a method of treatment not previously employed.

Previous History.—The previous history of this patient is instructive and important, not only because it may offer an explanation of the persistent vomiting, but because it will introduce the details of another rare complication which fortunately did not present the obstacle to delivery anticipated. The mother of the patient was the third child of an "old Englishman and a young Irishwoman," and was the only one of



a large family of children afflicted with exostoses, which were mostly located on the long bones in proximity to the joints. The patient is one of eight children of this mother, all of whom inherited this peculiarity of the osseous system. In most of these children the exostoses are located in the neighborhood of the ankle and wrist joints. They have not been observed previous to the seventh or eighth year of age, and have been believed to have followed injury to the bone or joint involved.

The patient had a miscarriage at three and a half months, November 21, 1885, while residing in one of the Territories. Her statement is that she suffered during the continuance of this pregnancy, almost constantly, from nausea and vomiting; that the pains during the miscarriage were very severe, and that the placenta was not delivered until the fourth day. For several weeks following she was confined to her bed with fever, and for three months afterwards she "had hæmorrhages from the womb," so that she was greatly emaciated and reduced in health and strength. During her illness the nurse discovered an exostosis arising from the right ramus of the pubis, midway between the symphysis and inferior spinous process of the right ilium, nearly globular in form and measuring one and a half inches vertically. The patient had been aware of the presence of this tumor from early childhood, but as it had not perceptibly increased in size, nor occasioned any discomfort, had supposed it was normal until informed by the nurse to the contrary. The nurse had also volunteered the information that, in consequence of its position, she could not give birth to a living child at term.

In April, 1886, she consulted me, at my office, with special reference to this statement of the nurse, at the same time expressing a great desire to have a child, and a willingness to incur any reasonable risk. I was quite willing to assure her that the exostosis, located as before described, would not obstruct de-

livery at term, but declined to express the opinion that she could give birth to a living child, at term, *per vias naturales*, unless I could have the opportunity of a careful examination of the pelvic cavity. To this both the wife and husband finally consented and, by appointment, this exploration was made two days afterwards, at their residence in this city. This examination disclosed the existence of a sharply pointed exostosis jutting obliquely upwards from the inner surface of the ramus of the pubis immediately below the external and larger tumor, measuring (approximately) three-fourths of an inch in length. The upper border of its base seemed to be on the *linea ilio pectinea*; otherwise the pelvis seemed to be normal.

When informed of the existence of this exostosis the emphatic and definite statement was made, in the presence of her husband, that she was unwilling to continue, as she had done since her miscarriage, to deny to her husband the privileges and pleasures of conjugal rights, and that her desire to have a living child was so great that she was willing to incur any danger, short of certain death. These declarations were followed by the inquiry if the bony tumors could be removed, and if such an operation would be more or less dangerous to her than the birth of a living child? To this I replied that such an operation might be performed, but that I thought the chances of survival would be less than from some one of several obstetric procedures which might be expedient in the event that she should again become pregnant.

Then followed the graver question: Could she be delivered of a living child at full term? My reply was as follows: Premature delivery at the seventh, eighth, or eighth and a half month might, under certain circumstances to be ascertained during the progress of pregnancy, be considered the wisest procedure. If permitted to go to full term Cæsarean section or one of its modifications, or gastro-elytrot-

omy, might be considered the proper methods. Either of these operations might secure the birth of a living child, but would be attended with considerable danger to her. That craniotomy might be less hazardous to her than either of the other surgical procedures referred to, but the child would necessarily be destroyed. She promptly and positively rejected craniotomy, and expressed a decided preference for one of the surgical methods because they seemed to her to offer better chances for a living child. I then added that I believed, under certain favorable circumstances, she might give birth to a living child at full term *per vias naturales*. These were: a female child, a small and flexible head, a vertex presentation either in L. O. A. or R. O. P. position, or, if the presentation and position were recognized in time, the change of either the R. O. A. or L. O. P. to one or the other of those positions of the vertex, so that the head would descend with the side and not the face or occiput towards the exostosis. If the presentation should be breech the chances would be less, but not necessarily fatal to the child.

She accepted these possibilities with the greatest pleasure, and with exultation expressed her determination to take the chances with the risks. We parted with the agreement that if she should become pregnant I would receive notice as soon as she was entirely satisfied of the fact. To this I reluctantly consented, for I would have preferred to have terminated my services with the expression of my opinion and been superseded by some colleague more anxious than I to witness the possibilities of the future.

Her womanly courage proved equal to her heroic enthusiasm. Late in July I received a note from her communicating the information that she was pregnant and requesting me to call. She dated her pregnancy from the 7th of May. I found her in perfect and robust health, full of enthusiasm, and equally determined as when we parted in April. The whole subject

was again calmly and deliberately discussed. I left her with the injunction to give me immediate notice of any symptom of ill-health, and especially of the first movements of the foetus. On September 8 I was informed that the first sensation of motion of the foetus had been felt the day before. My examination of the pelvis verified the condition ascertained in April. I could not discover any other obstacle to labor than the exostosis before described. The date of confinement was then fixed for February 7, 1887. I left her with the statement that I would not, if then, interfere in any manner before the completion of the seventh month, unless something unexpected should occur. At this visit, as at every visit made by appointment during her pregnancy, she had a severe rigor with marked trembling. Similar attacks were not infrequent, and were attributed by the patient to "nervousness." They were always relieved by a potation of whiskey without any subsequent ill-effects. These tremblings, usually lasting a half-hour, were so general and tumultuous that an examination could not be conducted until they had subsided.

After a careful examination in December, during the early days of the eighth month, I concluded to defer the induction of premature labor, because I was convinced the foetus was small, probably a female with a small head. Her health had continued, without interruption, good. She thought she never had enjoyed such health as since her pregnancy began.

January 2, 1887, Dr. J. Taber Johnson made a careful examination. We concurred in the decision that she should be permitted to go to term. This decision was accepted with marked pleasure.

Labor began at 5 P.M. on February 8, and terminated successfully at 3:30 A.M., February 9. I arrived at 10 P.M., five hours after the hour named when labor commenced. The os was dilated sufficiently to admit two fingers, and dilatable. The bag of waters was forming but not protruding. The head

presented in L. O. A. position. The sutures were easily distinguished. The head was small and flexible. The pains were frequent and sharp, but ineffective. Just at the moment of greatest intensity of every pain violent retching and vomiting would set in, which ceased with shivering. The pains seemed to cease spontaneously with the onset of these complications. The patient and nurse agreed in the statement that the gastric disturbances had continued from the beginning of the pains as I had witnessed them. Her pulse and general condition were good, except that during these attacks her pulse would rise rapidly, sometimes to 120, and then subside during the interval to 80 or 90. There was also a frequently recurring, irresistible desire to pass water. Her courage was unabated, and her cheerfulness and enthusiasm were unimpaired. The bowels and bladder had been freely evacuated before my arrival. The shiverings were arrested by the usual potation of whiskey, which the nurse had refused to allow without my consent. The vomiting not only continued, but manifestly increased in duration and violence, notwithstanding my efforts to arrest it with pellets of ice, alkalies, and hot water. The matter vomited was fluid, very slightly streaked with mucus. The intervals of relief grew shorter and the pains more acutely teasing and worrying. The signs of exhaustion were shown in the more continuous frequency and feebleness of the pulse, varying from 110 to 124, increasing restlessness and anxiety, with a facial expression of suffering and tire, and constant appeals for assistance. From the time of my arrival until midnight there was no appreciable progress in the labor. The relations of the head and condition of the cervix remained unchanged.

With the end of my index finger against the most dependent portion of the bag of waters during a pain, I frequently recognized the simultaneousness of the beginning of the vomiting and subsidence of the uterine contractions, and their correspondence with

the moment when the pain or contraction had reached its maximum intensity. If this observation were correct, and the method adopted correctly measured the duration and degree of the uterine contractions, no progress in the labor could be expected during the continuance of the conditions which produced the inertia. Three methods of relief were considered: rupture of the amniotic sac, a rectal injection of chloral hydrate, and anæsthesia. I determined to try the last first and, in the event of failure, each of the others in retrograde succession. At 11:50 P.M. I began the administration of the A. C. E. mixture. The vomiting ceased; the pulse improved in force and volume, and slowed, and the pains became more direct and distinctly intermitting. After continuing the anæsthesia for three-quarters of an hour it was suspended. The vomiting recurred. The anæsthetic was resumed and not again withdrawn until the head had escaped. The vomiting did not return.

At 1:30 A.M. I ruptured the amniotic sac, and delivery was completed at 3:30 A.M., February 9. The sac was ruptured because its persistence retarded the labor. After the cessation of the stomachal complication nothing worthy of special notice occurred. During the progress of the descent of the head I examined the relation of the head to the exostosis several times. It did not present any obstacle to delivery. There was not upon any part of the child any mark of its impingement. The child, a female, weighed $7\frac{1}{2}$ pounds. Her convalescence was satisfactory, except unusual thirst and hunger during the first day, and delay of milk until the sixth.

The patient was a healthy, robust young woman, bright, intelligent and cheerful, and possessing more than ordinary will-power, self-control and courage. Nevertheless, as admitted since her confinement, she was, from the beginning to the termination of pregnancy, under continuous and very severe mental strain. At times, when disturbed by some perturb-

ating circumstance, such as a visit by appointment from me, the dominating influence of her will would lose its controlling power, hence the rigors and shiverings. These, as well as the persistent vomiting, must be regarded as nervous, perhaps hysterical phenomena. The condition of her health during the period of pregnancy excluded uræmia and every disorder of the chylo-poietic viscera which could have borne any etiological relation to the hyper-emesis. Mental strain with loss of will-power culminated with the onset of labor. The knowledge of the fact that with the beginning of the pains the travail had commenced, to which for nine consecutive months her highest and noblest aspirations, as well as the gravest forebodings, had pointed as the most momentous act in her life, was quite sufficient, even in one so courageous and self-poised, to produce some serious neurotic complication.

The causal relation of the mental condition to the persistent vomiting is affirmed by the fact that obliteration of consciousness, pain and cerebation by narcosis, arrested the stomachal disorder, which recurred upon the restoration of these faculties, but again ceased, not to return during anæsthesia, notwithstanding the contractions of the womb continuously increased in intensity and duration during the same time. The coincidence between the uterine contractions and the vomitings does, however, seem to establish the relation of cause and effect. Sick labors are usually associated with rapid dilatation of the cervix. In this case the os had dilated to two fingers' width (about the size of a silver half-dollar) at the expiration of the seventh hour of continuous labor, and dilated much more rapidly after the arrest of the vomiting.

Vesical tenesmus is constantly found in connection with a rigid os, but in this case it was persistent with a dilatable os, and ceased with the vomiting during narcosis. The slowed dilatation was undoubtedly

due to the arrest of uterine contraction by the simultaneous attacks of nausea and vomiting. With a dilatable os there was no protrusion of the amniotic sac, and the amount of liquor amnii was small, so that intra-uterine pressure could not be considered a factor unless, perhaps, the small quantity of amniotic fluid permitted closer contact of the uterus with the irregularities of the foetal ovoid. During the first pregnancy the patient had suffered continuously from nausea and vomiting, but during the second she had been entirely free from any digestive disorder. Thus, while I would not deny the reflex relation between the contractions of the uterus and the stomachal complication, the history of the case, and rather singular array of phenomena occurring during labor, together with the relief obtained by semi-narcosis, compel me to reject it as the sole or chief element of causation of the persistent vomiting.

This case is another striking illustration of the value of anæsthesia in labor. The contractions of the uterus were concentrated and increased in power. Usually I do not commence the administration of the anæsthetic before the beginning of the second stage, but I have quite frequently witnessed a similar result when, in consequence of some perturbation, the uterine contractions seem to be ill-defined, diffused, and as it were wasted. In very many cases anæsthesia expedites labor, in a few it retards it, and in very rare instances it is not well borne, and has to be withdrawn. During the past two years I have most frequently employed the A. C. E. mixture with satisfactory results. It seems to be equally effective in lessening suffering, with less narcosis.



